

WHAT IS CLAIMED IS:

1. A method of searching audio data, comprising:
receiving a query defining multiple phonetic possibilities; and
comparing the query with a lattice of phonetic hypotheses associated with the audio data to identify if at least one of the multiple phonetic possibilities is approximated by at least one phonetic hypothesis in the lattice of phonetic hypotheses.
2. The method of claim 1 and further comprising:
calculating a score indicative of the difference between said at least one of the multiple phonetic possibilities and said at least one hypothesis in the lattice.
3. The method of claim 3 and further comprising:
adding a penalty value to the score if said at least one of the multiple phonetic possibilities is approximated by disconnected phonetic hypotheses.
4. The method of claim 1 and further comprising:
identifying a plurality of phonetic hypotheses in the lattice of phonetic hypotheses that approximate the query.

5. The method of claim 4 and further comprising:
ranking the plurality of phonetic hypotheses
identified.
6. The method of claim 1 and further comprising:
identifying a time span associated with said at
least one phonetic hypothesis in the
lattice of phonetic hypotheses.
7. The method of claim 1 wherein the query is
represented as at least one of a finite-state
network, a context-free grammar and a prefix tree.
8. A method of generating a lattice from audio
data, comprising:
recognizing phonetic fragments within the audio
data, wherein at least some of the phonetic
fragments include at least two phones; and
calculating a score for paths joining adjacent
phonetic fragments.
9. The method of claim 8 and further comprising:
calculating time values and individual acoustic
scores for each phone of each of the
phonetic fragments.
10. The method of claim 8 and further comprising:
pruning paths that have a score that does not
meet a threshold level.

11. The method of claim 8 and further comprising:
collapsing a plurality of audio frames in the
audio data into a single audio frame.
12. A computer readable-medium encoded with a data
structure, comprising:
 - a plurality of phoneme hypotheses and an
associated score for each hypothesis,
wherein at least some of the hypotheses
form phonetic fragments that include at
least two phones; and
 - a plurality of transitions connecting the
phoneme hypotheses.
13. The computer readable-medium of claim 12 wherein
the plurality of phoneme hypotheses corresponds to
recorded audio data.
14. The computer readable medium of claim 13 wherein
each associated score represents the likelihood of
the phoneme hypotheses given the recorded audio data.
15. The computer readable medium of claim 12 wherein
the plurality of transitions include an associated
time value.
16. The computer readable medium of claim 1 wherein
the data structure further includes a plurality of

fragment transitions connecting one phoneme hypothesis in one phonetic fragment to another phoneme hypothesis in another phonetic fragment.